

radiating antenna (1) and multiple thermocouples (6,6',6"), the radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna (1) [is] adapted to be submerged within a flow which proceeds through a central channel (2) surrounding said radiating antenna (1) towards the distal end of said catheter and passes from said catheter through a first opening (3) into a bladder to be treated, while flowing back into said catheter towards [the] a proximal end thereof through a second separate opening (4) of a side channel (5) surrounding [the] power supply cables of said thermocouples (6,6',6"),

[the] ends of said thermocouples (6,6',6") are adapted to project out of said second opening (4), being thus deflected outwards into the bladder when said balloon (7) is inflated by injecting a fluid through a second side channel (8) and third opening (9), whereby [the] outwardly deflected ends of said thermocouples (6,6',6") are adapted to come into tangential engagement with a bladder wall (32) irradiated by said antenna (1).

2. A radiating device including a catheter provided at its distal end with an inflatable balloon and adapted to receive multiple injected liquid fluid flows passing therethrough, a radiofrequency radiating antenna and multiple thermocouples, the radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna is adapted to be submerged within a flow which proceeds through a central channel surrounding said radiating antenna towards a distal end of said catheter and passes from said catheter through a first opening into an organ to be treated,

while flowing back into said catheter towards a proximal end thereof through a second

separate opening of a side channel surrounding power supply cables of said  
thermocouples.

ends of said thermocouples are adapted to project out of said second opening,  
being thus deflected outwards into the organ when said balloon is inflated by injecting a  
fluid through a second side channel and third opening, whereby the outwardly deflected  
ends of said thermocouples are adapted to come into tangential engagement with a wall of  
the organ irradiated by said antenna.

3. A radiating device including a catheter provided at its distal end with an  
inflatable balloon and adapted to receive multiple injected liquid fluid flows passing  
therethrough, a radiofrequency radiating antenna and multiple thermocouples, the  
radiating antenna being submerged within a fluid flow, characterized in that

said radiating antenna is adapted to be submerged within a flow which proceeds  
through a central channel surrounding said radiating antenna towards a distal end of said  
catheter and passes from said catheter through a first opening into an organ to be treated,  
while flowing back into said catheter towards a proximal end thereof through a second  
separate opening of a side channel surrounding power supply cables of said  
thermocouples,

ends of said thermocouples are adapted to project out of said second opening,  
being thus deflected outwards into the organ when said balloon is inflated by injecting a  
fluid through a second side channel and third opening, whereby outwardly deflected ends  
of said thermocouples are adapted to come into engagement with a wall of the organ  
irradiated by said antenna.

4. A radiating device for irradiating an organ comprising:

a catheter provided with an inflatable balloon and including a central channel, first  
and second side channels, and first, second, and third openings;

an antenna, situated at a first end portion of the catheter, the antenna adapted for  
being submerged in a first fluid that flows through the central channel surrounding the  
antenna towards the first end portion of the catheter, passes from the catheter through the  
first opening, and flows back into the catheter towards a second end portion thereof  
through the second opening; and

a plurality of thermocouples, having ends, the plurality of thermocouples  
extending along the first side channel of the catheter, each of the ends of the plurality of  
thermocouples adapted to project out of the second opening and to be deflected outwards  
when the balloon is inflated by injecting a second fluid through the second side channel  
and the third opening.

wherein the deflected ends of the plurality of thermocouples adapted to contact a  
wall of the organ irradiated by the antenna.

5. A radiating device for irradiating an organ comprising:

a catheter provided with an inflatable balloon and including first and second  
channels and a first opening;

an antenna, situated at an end portion of the catheter, the antenna adapted for  
being submerged in a fluid that flows through the first channel surrounding the antenna  
and into the organ; and

a plurality of thermocouples, having ends, the plurality of thermocouples  
extending along the second channel, each of the ends of the plurality of thermocouples  
projecting out of the first opening and being deflected outwards when the balloon is  
inflated.

wherein the deflected ends of the plurality of thermocouples are adapted to  
contact a wall of the hollow organ irradiated by the antenna.

6. A radiating device for irradiating an organ comprising:  
a catheter provided with an inflatable balloon;  
an antenna, situated at an end portion of the catheter, adapted for irradiating the  
organ;  
a channel for providing a fluid to the organ; and  
a plurality of thermocouples, having ends, the plurality of thermocouples  
extending along the catheter, each of the ends of the plurality of thermocouples being  
deflected outwards when the balloon is inflated,  
wherein the deflected ends of the plurality of thermocouples are adapted to  
contact a wall of the organ irradiated by the antenna.

7. A radiating device for irradiating an organ comprising:  
a catheter provided with an inflatable balloon and including first and second  
channels and a first opening;

an antenna, situated at an end portion of the catheter, the antenna adapted for  
being submerged in a fluid that flows through the first channel surrounding the antenna  
and into the organ; and

a plurality of temperature sensing devices, having ends, the plurality of  
temperature sensing devices extending along the catheter, each of the ends of the plurality  
of temperature sensing devices being deflected outwards when the balloon is inflated,  
wherein the deflected ends of the plurality of temperature sensing devices are  
adapted to contact a wall of the organ irradiated by the antenna.

8. A radiating device for irradiating an organ comprising:  
a catheter provided with an inflatable balloon;  
an antenna, situated at an end portion of the catheter, for irradiating the organ;  
a channel for providing a fluid to the organ; and  
a plurality of temperature sensing devices, having ends, the plurality of  
temperature sensing devices extending along the catheter, each of the ends of the plurality  
of temperature sensing devices being deflected outwards when the balloon is inflated,  
wherein the deflected ends of the plurality of temperature sensing devices are  
adapted to contact a wall of the organ irradiated by the antenna.

9. A radiating device for irradiating an organ comprising:  
a catheter;  
an antenna, situated at an end portion of the catheter, adapted for irradiating the  
organ;

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a channel, within the catheter, adapted for providing a fluid comprising a  
cytotoxic substance to the organ; and  
a plurality of temperature sensing devices, having ends, the plurality of  
temperature sensing devices extending along the catheter, each of the ends of the plurality  
of temperature sensing devices adapted for being deflected outwards after the catheter is  
inserted into the organ,

wherein the deflected ends of the plurality of temperature sensing devices are  
adapted to contact a wall of the organ irradiated by the antenna.

10. A radiating device for irradiating an organ comprising:  
a catheter, including a channel adapted for providing a fluid to the organ;  
an antenna, situated at an end portion of the catheter, adapted for irradiating the  
organ; and  
a plurality of temperature sensing devices, having ends, the plurality of  
temperature sensing devices extending along the catheter, each of the ends of the plurality  
of temperature sensing devices being deflected outwards after the catheter is inserted into  
the organ,

wherein the deflected ends of the plurality of temperature sensing devices are  
adapted to contact a wall of the organ irradiated by the antenna.

11. A radiating device for irradiating a cavity comprising:

a catheter;

an antenna, situated at an end portion of the catheter, for irradiating the cavity;

a channel extending along the catheter and adapted for providing fluid to the  
cavity; and  
a plurality of temperature sensing devices, having ends, the plurality of  
temperature sensing devices extending along the catheter, each of the ends of the plurality  
of temperature sensing devices being deflected outwards after the catheter is inserted into  
the cavity,  
wherein the deflected ends of the plurality of temperature sensing devices are  
adapted to contact a wall of the cavity irradiated by the antenna.

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14. The radiating device as recited in claim 13, adapted for fluid flow by the  
antenna and into the cavity.

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16. The radiating device as recited in claim 15, adapted for fluid flow by the  
shielded cable and the antenna and into the cavity.

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18. The radiating device as recited in claim 11, adapted for flow of a  
conditioning liquid.

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19. The radiating device as recited in claim 11, adapted for flow of a solution  
of a selective cytotoxicity substance.

20. The radiating device as recited in claim 11, wherein the antenna is adapted  
for a frequency range of 900-1000 MHZ.

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